

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-7. (canceled)

1 8. (previously presented): An optical transmission unit executing light signal
2 dispersion compensation, comprising:

3 an optical branching filter which receives a first wavelength-multiplexed light
4 signal and splits it into at least a first light signal and a second wavelength-multiplexed light
5 signal;

6 a first dispersion compensator coupled to receive the second wavelength-
7 multiplexed light signal and provide dispersion compensation;

8 a second dispersion compensator which receives a second light signal and
9 compensates for dispersion of the second light signal to produce a compensated second light
10 signal; and

11 an optical coupler configured to receive at least the second wavelength-
12 multiplexed light signal from the first dispersion compensator and the compensated second light
13 signal, and to couple the second wavelength-multiplexed light signal and the compensated
14 second light signal to thereby output a third wavelength-multiplexed light signal.

9. (canceled)

1 10. (previously presented): The optical transmission unit according to claim 8
2 further comprising a third dispersion compensator coupled to compensate for dispersion of the
3 first wavelength-multiplexed light signal.

1 11. (previously presented): The optical transmission unit according to claim 8
2 further comprising an amplifier coupled to amplify the second wavelength-multiplexed light
3 signal from the first dispersion compensator.

1 12. (previously presented): An optical transmission unit executing light signal
2 dispersion compensation, comprising:
3 a first dispersion compensator to receive a first wavelength-multiplexed light
4 signal and to compensate for dispersion of the first wavelength-multiplexed light signal;
5 an optical branching filter coupled to receive the first wavelength-multiplexed
6 light signal from the first dispersion compensator and to output a first light signal and a second
7 wavelength-multiplexed light signal;
8 a second dispersion compensator coupled to compensate for dispersion of the
9 second wavelength-multiplexed light signal; and
10 an optical coupler configured to receive the second wavelength-multiplexed light
11 signal from the second dispersion compensator and to receive a second light signal, thus
12 providing a third wavelength-multiplexed light signal at an output.

13. (canceled)

1 14. (previously presented): The optical transmission unit according to claim
2 12 further comprising a third dispersion compensator disposed to compensate for dispersion of
3 the second light signal.

1 15. (previously presented): The optical transmission unit according to claim
2 12, further comprising an amplifier coupled to receive and amplify the second wavelength-
3 multiplexed light signal from the first dispersion compensator.